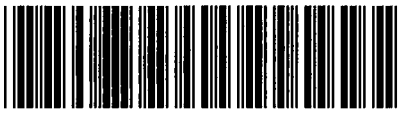

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RULEMAKING ESTABLISHING	§	**PUBLIC UTILITY COMMISSION**
ELECTRIC WEATHERIZATION	§	FILING CLERK
STANDARDS	§	**OF TEXAS**

SHARYLAND UTILITIES, L.L.C.'S RESPONSE TO
REQUEST FOR COMMENTS

Sharyland Utilities, L.L.C. ("Sharyland") hereby submits this response to Public Utility Commission of Texas ("Commission") Staff's request for comments issued in this project on June 9, 2021. Commission Staff requested comments by June 23, 2021. Therefore, these comments are timely filed.

I. Introduction

Sharyland appreciates the opportunity to submit these comments and looks forward to working with the Commission and other stakeholders to address weatherization issues. Sharyland is a transmission-only electric utility providing wholesale transmission service at both transmission level and distribution level voltages in the Electric Reliability Council of Texas ("ERCOT") power region. Sharyland's current transmission system, located in the South Texas area, consists of approximately 64 circuit miles of 345-kilovolt ("kV") and 138-kV transmission lines, including approximately 47 miles of the Palmito to North Edinburg 345-kV transmission line. Sharyland owns and maintains one switching station and four substations, with three of the substations providing wholesale distribution substation service to AEP Texas, Inc. Sharyland also owns and maintains a high voltage direct current tie between ERCOT and Comisión Federal de Electricidad.

Sharyland is providing these comments from the perspective of a transmission service provider ("TSP"). Accordingly, Sharyland responds only to Issue No. 2 in Commission Staff's request for comments:

> To fulfill the requirements of Texas Utilities Code § 38.075(a), under what weather emergency conditions should the Commission require an electric cooperative, municipally owned utility, or transmission and distribution utility providing transmission service in the ERCOT power region to be able to operate its transmission facilities? At a minimum, please address standards for temperature,

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icing, wind, flooding, and drought conditions. For each, please address whether the standard should vary by region or by type of generation facility. Please provide any relevant support for your recommendations, including existing or proposed standards in other jurisdictions, or related studies.

Sharyland shares the Commission's appreciation for the importance of a resilient electric system and the need to maintain reliable service during severe weather conditions. The recent, tragic events of Winter Storm Uri highlighted the importance of a robust and resilient grid. Sharyland supports the broader effort to ensure the transmission system can continue to serve Texas families and businesses during severe weather conditions. With respect to the question issued in this project about standards applicable during weather emergency conditions, Sharyland asserts that TSPs are currently subject to numerous reliability and design standards to enhance grid resiliency during severe weather, including many standards developed at the national level. Sharyland believes the Commission can advance the goal of maintaining reliable service during severe weather events by incorporating these already-existing standards in its rules. These existing standards recognize that different standards are appropriate for different weather regions. Incorporating (or explicitly referring to) these existing standards in its rules can increase the Commission's oversight and enforcement over resiliency and weatherization measures.

II. Comments

A myriad of standards currently exist for transmission infrastructure, including those established by the National Electrical Safety Code ("NESC") and the American National Standard Institute ("ANSI"). These standards, as well as other standards they incorporate by reference, relate to the weather events listed in Issue No. 2. The NESC provides standards for the safe and reliable installation, operation, and maintenance of electric facilities, including transmission lines, substations and switching stations, and other utility infrastructure. The Institute of Electrical and Electronics Engineers ("IEEE") updates and publishes the NESC every five years in order to keep the standards current as the industry evolves. The NESC, for example, specifies environmental loading conditions—i.e., during wind and ice storms—that transmission structures must withstand. Rules 250B, 250C, and 250D of the NESC divide the continental United States into three geographic Loading Zones (Light, Medium, and Heavy) and impose certain minimum loading requirements for wind and ice depending on the facilities' locations. However, even within each of these three geographic zones, there are varying requirements (with additional complexities) addressing combinations of wind and ice loadings based on more granular environmental

conditions. Consistent with the NESC, if an electric facility is located across multiple Loading Zones, then the required loading "shall be the one that has the greatest effect."[1] In other words, if an electrical facility is installed so as to span multiple Loading Zones, then the most constraining load requirements shall govern the entire facility. The NESC also addresses standards for temperature ratings, for example, in Rules 230 and 232 through 235. In addition, the NESC incorporates by reference American Society of Civil Engineers ("ASCE") standards, which provide for other reliability-centric design aspects such as foundation design considerations for different soil types (e.g., wet or dry) that can be encountered during flood or drought conditions.

Sharyland designs, constructs, operates, and maintains its infrastructure consistent with all applicable existing codes, standards, and guidelines to provide safe and reliable transmission service, and it is Sharyland's understanding that other TSPs in Texas do so as well. Sharyland designs its transmission facilities to meet or exceed NESC, ANSI, and other standards established for particular geographic areas that were in effect at the time the facilities were first placed into service or upgraded. For instance, Sharyland's transmission line facilities in South Texas were designed using 140-mph wind speed criteria, and for increased reliability, a load factor of 1.1 was applied to the loading cases (e.g., wind, mechanical, etc.), which exceeds the NESC minimum of 1.0.

In addition to the NESC requirements in effect at the time of design, including clearance, structural, and grounding requirements, standards also applied by Sharyland include, but are not limited to, the following:

- ASCE 48-05 - Design of Steel Transmission Pole Structures;
- ASCE 10-97 - Design of Lattice Steel Transmission Structures;
- ASCE 74-2009 - Guidelines for Electrical Transmission Line Structural Loading;
- ASCE 7-93 - Minimum Design Loads for Buildings and Other Structures;
- ASCE/SEI 7-10 - Design Loads for Buildings and Other Structures;
- IEEE Std. 1313.1-1996 - Standard for Insulation Coordination;
- IEEE Std. 1313.2-1999 - Standard for Insulation Coordination; and
- IEEE Std. 1243-1997 - Guide for Improving the Lightning Performance of Transmission Lines.

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[1] 2017 National Electrical Safety Code® (NESC®) C2-2017, Section 25, Part 250A.

Furthermore, Sharyland and other TSPs are subject to current North American Electric Reliability Corporation ("NERC") reliability standards. An example of NERC standards relates to vegetation management. Vegetation management is essential to storm-hardening and weatherization, as outages during wind storms, ice storms, and even droughts are often the result of damaged trees. NERC Standard FAC-003-4 addresses transmission vegetation management, and is reflected in Sharyland's current Vegetation Management Program. Another example is NERC Standard FAC-008-3, which is the basis for Sharyland's Facility Rating Methodology that establishes the ratings for Sharyland's facilities and considers ambient conditions and operating limits.

Developing new uniform standards applicable to all TSPs across the state would be difficult because design criteria vary depending on the region. This is particularly true for a state as large and diverse as Texas, with very different climates depending on the area. In fact, Texas is the only state that includes portions of the NESC Heavy, Medium, and Light Loading Zones. The design criteria for transmission lines constructed in the Panhandle, West Texas, Central Texas, and along the Gulf Coast are significantly different. For example, the minimum design criteria for ice thickness ranges from zero inch in far West Texas (El Paso) to three-fourths of an inch or more in the Panhandle (Amarillo). To put this in perspective, the basic ice loading design requirements in the Panhandle effectively doubles the weight of the conductor itself. The basic wind loading criteria range from 90 mph (in the El Paso, Amarillo, and Austin areas), to 110 mph (in the McAllen and Lufkin areas), to 140 mph or more (along the Gulf Coast). The existing standards, including the NESC, account for these geographic and climate distinctions.

Given the expansive amount of already-existing electric utility standards that apply to TSPs' transmission facilities, Sharyland believes the Commission could revise its current reliability rules to incorporate or reference existing standards. This approach would give the Commission additional authority to enforce those standards.

Finally, aside from the issue of design standards, Sharyland notes that storm-hardening and weatherization on the transmission system can be facilitated by maintaining a robust electric grid that ensures adequate transmission capacity and necessary redundancy during emergency events. Increasing redundancy involves placing in service additional transmission capacity such that if a critical component of the system (e.g., a transmission line) becomes unavailable during a storm or other reliability event, there are additional transmission paths that can maintain service to loads in

other areas of the grid. This approach enhances reliability during extreme weather conditions, like hurricanes, tornados, or ice storms, and mitigates transmission constraints. Updating ERCOT's transmission planning criteria or the certificate of convenience and necessity criteria in the Commission's rules to take into account redundancy benefits could help increase resiliency and decrease load shed across the system during emergencies. Sharyland supports these efforts to facilitate a robust and reliable electric grid that minimizes Texans going without power for extended periods during weather events.

III. Conclusion

Sharyland appreciates the opportunity to submit these comments, and looks forward to working with the Commissioners, Commission Staff, and other stakeholders on these important issues.

Respectfully Submitted,

/s/ John M. Zerwas, Jr.

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